

Solano County Mosquito Abatement District

2007-2008 Solano County Grand Jury

Reason for Investigation

Under the authority of California Penal Code section 925, the 2007-2008 Grand Jury elected to investigate the Solano County Mosquito Abatement District.

Grand Jury Actions

- Toured the Mosquito Abatement District Office
- Interviewed Mosquito Abatement District staff
- Viewed mosquito traps
- Reviewed Health and Safety Code sections 2000-2805, 2877-2878, 106925, 116110-116112, 116175-116183
- Reviewed minutes of the Solano County Mosquito Abatement District Board of Trustees
- Reviewed miscellaneous public documents related to mosquito abatement
- Reviewed the Brown Act

Background / Summary

In May 1915, the California State Legislature passed the Mosquito Abatement Act, giving local governments the power to obtain revenues and form special districts to protect the public from the hazards of mosquito bites and mosquito-borne diseases. The Solano County Mosquito Abatement District (SCMAD) was formed in 1930 to control the salt marsh mosquitoes that were breeding in the Suisun Marsh.

SCMAD conducts surveillance and abatement programs for mosquitoes throughout Solano County. SCMAD does not deal with agricultural pests.

California's climate and landscape support a wide diversity of biological organisms. Some of these organisms carry human disease pathogens or directly cause other human disease.

There are 21 species of mosquitoes in Solano County. Twelve are important either as carriers of disease or as pests. Mosquitoes develop during both summer and winter. During the winter months, three species of mosquitoes are produced in the tidal marsh area (over 1200 acres) along San Pablo Bay. All are large, strong fliers and aggressive biters. A female mosquito can lay up to 150 eggs at a time and often has more than one brood. Some mosquitoes feed off of reptiles, frogs and snakes. Male mosquitoes are generally smaller and do not bite.

West Nile Virus is spread by infected mosquitoes. It can cause serious, life-altering disease and sometimes death. In 1999, West Nile Virus was first introduced into the United States in New York City. A mosquito is infected by feeding on a bird with the virus in its blood. In 2006-07, 54 human cases were identified in California. Five cases were in the Dixon/Vacaville area.

SCMAD controls mosquitoes using the most effective and economic measures that produce the least amount of damage to non-target organisms and the environment. A variety of measures are used to eliminate mosquitoes. These may include fogging and aerial or ground spraying. Preventive measures are emphasized. Notice is not necessary before fogging or spraying an area. A district may request an inspection and abatement warrant to inspect and abate the exterior areas of privately owned property to determine the presence of infected mosquitoes. Fogging only kills the adult mosquito. Field technicians use amphibious vehicles to get to remote areas to be sprayed. Heavily populated areas generally have more problems because of the increased opportunity for standing water. Mosquitoes can not live in moving water.

Two types of traps are used to capture mosquitoes to test for the presence of disease organisms. The New Jersey sunlite trap uses a five watt compact florescent bulb built to attract the mosquitoes and is placed outside for one week. The Carbon Dioxide trap is used for overnight trapping. The trapped insects are evaluated at SCMAD laboratory or, if needed, sent for further analysis to the UC Davis Center for Vector-Borne Disease Control.

SCMAD raises and provides Mosquitofish free to residents of Solano County. The Mosquitofish is a live bearing American fish that feeds on mosquitoes. It produces live offspring every 18-30 days depending on the weather. Mosquitofish may be stocked by technicians without special permits. These fish exhibit a high tolerance for a wide range of temperatures. Mosquitofish are bred in two large ponds at SCMAD.

Facilities

SCMAD is housed in a facility built in 1994. It is located at 2950 Industrial Court in Fairfield. The facility is clean and large enough to accommodate staff expansion for many years.

Staff

SCMAD staff consists of nine employees. These include one manager, one secretary, one biologist and six technicians. The six technicians provide abatement services for the entire county and also maintain the equipment. Every district employee who handles, applies or supervises the use of any pesticide for public health purposes must be certified as a Vector Control Technician.

Budget

The total budget for 2006-2007 was \$3,806,879 which includes a reserve of \$914,222. The reserve fund is used as an emergency response fund when an immediate and substantial threat occurs. This may include the rental of aircraft for aerial spraying. Funding comes from property taxes at a rate of \$.50 per \$1,000.

Board of Trustees

The SCMAD Board of Trustees consists of eight members. Each city in Solano County is represented by one member. The eighth is appointed from the unincorporated area by the Board of Supervisors. Members serve a four year term. The Board meets on the second Monday of each month at 7:30 pm and each trustee is reimbursed \$100 per meeting. The agendas for all board meetings are posted next to the front door of the district office where they are easily

visible to the public in conformance with the Brown Act. Meetings are generally less than an hour long. Minutes are incomplete making it difficult for anyone not in attendance to know what issues are discussed. One trustee attended fewer than 30 percent of the meetings.

Although Health and Safety Code section 2029, subdivision (e) mandates that the board of trustees shall adopt rules for its proceedings, this grand jury was unable to obtain any rules or bylaws relating to its proceedings from SCMAD.

Findings and Recommendations

Finding 1 - The meetings of the Solano County Mosquito Abatement District Board of Trustees are short and minutes are brief.

Recommendation 1 - Meeting minutes should be more detailed to make it easier for those unable to attend to understand the work of the Board.

Finding 2 - Health and Safety Code section 2029, subdivision (e) requires that the board of trustees of a mosquito abatement district adopt rules for its proceedings. The Solano County Mosquito Abatement District Board of Trustees apparently has not done so.

Recommendation 2 - Pursuant to that statute, the Board of Trustees should adopt rules for its proceedings.

Finding 3 - There are no rules regarding attendance by board members.

Recommendation 3 - When adopting rules for its proceedings, the Board of Trustees should include minimum standards of attendance.

Affected Agencies

- Solano County Mosquito Abatement District
- Solano County Mosquito Abatement District Board of Trustees

Courtesy Copy

- Solano County Board of Supervisors
- Benicia City Council
- Dixon City Council
- Fairfield City Council
- Rio Vista City Council
- Suisun City Council
- Vacaville City Council
- Vallejo City Council
- UC Davis Center for Vector-borne Disease Research